

LAITHWAITE, E., WATSON, A. and WHALLY, P.E.S. 1975. 'The Dictionary of Butterflies and Moths in Colour.' E.J. Duckworth, W.D. Michael Joseph, London.

NAKAO, H.K. 1969. Biological control of weeds in Hawaii. *Proceedings First Asian-Pacific Weeds Control Interchange, Hawaii* : 93-95.

NESER, S. 1979. Observations in South Africa on *Microthrix inconspicuella* Ragonot (Phycitinae: Pyralidae), a natural enemy of *Emex australis* Steinheil. *Journal of the Entomological Society of Southern Africa* 42: 337-342.

PINHEY, E.C.G. 1975. 'Moths of Southern Africa.' Descriptions and Colour illustrations of 1183 species. Tafleburg. Cape Town.

SHEPHERD, R. C. H. (In Press). Host Specificity Testing of *Rhodometra sacraria* (L.) (Lepidoptera: Geometridae), a Possible Biological Control Candidate for *Emex australis* Steinheil in Australia. *Entomophaga*.

WALTER, H. and LIETH, H. 1960. 'Klimadiagramm Weltatlas.' Veb Gustav Fisher, Verlag, Jena.

BOOK REVIEW

Portraits of South Australian Geometrid Moths. By N. McFarland. I-IV + 400 pages, paperback, 26x35cm. Price \$US85 including surface postage to Australia and packing. Privately published, printed by Allen Press, Lawrence, Kansas, August 1988. Available from N. McFarland, P.O. Box 1404, Sierra Vista, Arizona 85636, USA.

In 1964 Noel McFarland became assistant entomologist at the South Australian Museum. In the following six years he pursued an intensive study of the early stages of Lepidoptera mostly around Adelaide. He became well known for his penetrating and thorough observations and the magnificent collection of preserved larvae and pupae that he built up. The massive documentation, in notes and in photographs, which lay behind his work has been largely unavailable until now. It is no secret that Noel preferred to study families with larvae which rested openly on the vegetation during the day and his greatest and most enthusiastic attention was given to the Geometridae. To successfully rear Lepidoptera they must have first call on one's time and Noel was fortunate in being able to do most of his work at home. Here also he collected many of the female moths whose eggs commenced his cultures and whose presence indicated the local availability of foodplants. On leaving the South Australian Museum in 1970 he continued rearing moths at Geraldton, W.A. for some years until returning to the United States. This book is the culmination of his six years work in Adelaide.

The core of the book is a series of comprehensive black and white photographs of eggs, larvae, pupae, living adults and pinned adults of each of the 72 species included. The photographs of each species are accompanied by a detailed text. Do not be misled by the title as the text is as important as the pictures. It is detailed and based almost entirely on first hand observations. The photographs are uniformly excellent, well reproduced, and as they are large show detail well. Multiple photographs illustrate each stage from different angles and in different poses.

There are two large sections in the book. The first, a species by species account of 46 species of Ennominae and Oenochrominae and the second a similar account of 36 Geometrinae, Larentiinae, and Sterrhinae. Preceding these an introductory section covers localities and habitats in detail with 88 photographs, contents lists and indices. Sandwiched between the two main sections is one containing all sorts of miscellaneous remarks. There is an index to miscellaneous topics, generalisations about the subfamilies, comments on foodplants and comments on resting positions of adults and larvae. Following the second large section there are some corrections, sections on techniques, a glossary and references. The main sections deal with each species under the headings: foodplants and phenology, adult, egg, larva, pupa, and data for figures. Each larval section, for example, might contain sections on behaviour, description, rearing notes, miscellaneous remarks and field notes. The miscellaneous index is a mine of all sorts of topics but essentially it gives a list of the species with, for example, "rain hatched eggs" or larvae which "curl and drop" when disturbed, frass which crumbles when ejected or larvae which rest on a silk mat. Noel McFarland has made every effort to have the species of moths and their foodplants identified as accurately as possible and the generous photographs make it likely that the inevitable taxonomic problems he encountered, when sorted out in future revisions, can be applied to his work on the evidence in the book itself.

The style of the text is very individualistic, very generous and often anecdotal. The text includes many incidental observations which make it lengthy but the observations are all from first hand experience and could prove to have more relevance or import than is at first apparent. If criticisms are necessary I have only a few. While the colours of the larvae are described in detail the important setal patterns are not considered. The photographs are without legends but as almost all are grouped with the text of the species and the page headed by the species number this is usually a minor inconvenience. A more serious inconvenience is the lack of scale bars on the photographs. Detailed measurements are given in the text but scale bars would make it easier to visualise the size of the individuals figured. The size of the book is large for a paperback and copies which see much use will need to be bound. The reproduction of the text, while clear and perfectly legible, is not crisp and clean. This is undoubtedly due to the processes chosen to reduce costs and I would prefer it this way rather than more expensive.

I can wholeheartedly recommend the book as an unlikely-to-be-repeated study essential for all with an interest in Australian moths. As well as taxonomists and collectors it can serve a useful purpose for forest ecologists, behaviourists or anyone likely to encounter the early stages of moths.

E.D. Edwards, *CSIRO, Division of Entomology, G.P.O. Box 1700, Canberra, ACT, 2601.*